CONTAINER

FIELD OF THE INVENTION

[0001] The invention relates to a container, in particular for receiving food, as well as a corresponding blank for manufacturing such a container.

BACKGROUND OF THE INVENTION

[0002] From practice, such containers are known, for example, in the form of cups or the like which are filled with food to be stored and subsequently taken out or alternatively to be directly consumed from the container.

[0003] One example for a collapsible container is known from EP 0 074 936 B1. This collapsible container comprises a tubular body with a wall made of at least two layers. At the upper end, a withdrawal opening serves for filling in the food as well as for consuming the food filled in. At the lower end, the collapsible container is closed. For the manufacture of the container, a two-dimensional blank is used which is first rolled and then connected with itself for forming a continuous container wall.

[0004] The material of the container wall is a relatively flexible and relatively stiff material, such as waterproof paper or plastics. However, with this known container, one cannot identify whether the container is filled with anything, and if so with what.

[0005] From the Japanese Utility Model Publication JP 56-156 777, another container is known which also serves for receiving food. This container is formed from a laminate of stiff paper and polyethylene layers applied on both sides thereof. A lid for closing the container consists of a laminate of aluminium foil and polyethylene layers applied on both sides thereof. The container is opaque, such that the interior of the container is optically not visible.

[0006] The object underlying the invention is to improve a container by facilitating in a simple

constructive and inexpensive manner an inspection of the interior of the container and all advantages of the known containers.

SUMMARY OF THE INVENTION

[0007] According to the invention, in addition a corresponding blank for the manufacture of such a container is provided.

[0008] The container according to the invention is characterized by the use of a material for at least a part of the container wall which combines apparently conflicting properties in an advantageous manner.

[0009] In order to securely store the food in the container, the material according to the invention is preferably liquid tight or fluid tight. This prevents a penetration or leak of liquid fluids and/or a penetration or leak of gaseous fluids. In case of dry, in particular pourable food, gastightness can be sufficient in this connection. One can also do without gastightness if the food does not negatively change its properties relevant for the consumption due to being contacted with a gas, such as O_2 or the like.

[0010] Simultaneously, this material is transparent. This results in a number of advantages, such as, for example, that after the manufacture of the container from the corresponding blank one can simply identify optically whether the interior of the container contains foreign substances and in particular impurities or whether it is damaged. This optical transparency of the collapsible container exists at least in the visible region (translucent) of the spectrum, however, it can also extend to the adjacent spectral regions, i.e. at least towards the infrared and/or ultraviolet region. The transparency makes it furthermore possible to monitor the filling degree of the corresponding food when it is filled in. In particular, the filling degree can be

monitored from a direction perpendicular to the filling direction.

[0011] The transparency of the material furthermore comprises, apart from the advantages for the filling of the container, a number of advantages for the consumer who wants to take the corresponding food out of the container or consume it directly from the container.

[0012] For the consumer, too, it is important to be able to identify the filling degree of the food in a simple manner. Furthermore, apart from the amount, for example, the consistence of the food filled in can be identified. This is analogously true for possible discolorations or colorations of the food. Such discolorations can, for example, permit conclusions as to the freshness of the food, and intended colorations of the food can give an additional optical buying incentive.

[0013] Another advantage of the transparency of the material is that during the consumption, one cannot only see through the withdrawal opening where the food is relative to the withdrawal opening, but that one can also find it out through the wall of the container. This for example prevents in case of a tipping of the container, the food from unintentionally exiting from the withdrawal opening.

[0014] In principle, it is sufficient for only a part of the container wall to be formed from the transparent or translucent and preferably liquid tight and/or fluid tight material. The remaining part of the container wall can be formed in the usual manner from stiffened paper or the like. However, according to the invention it is a greater advantage to form the complete container wall from this material, so that at every location the interior of the container can be identified through the container wall. This makes it superfluous to first rotate the container, if necessary, in order to find the transparent section of the container wall. If the

container wall, however, is only in one section transparent/translucent, the same favourably extends across the complete height of the food filled in to permit an observation of the maximum filling degree as well as a reduction of the filling degree during consumption. For doing so, it can be sufficient for the container wall to comprise a series of sections of the corresponding material along the height of the food filled in, which can also be spaced apart in the longitudinal direction of the container and, if necessary, also in the circumferential direction of the container.

[0015] As a corresponding material, polypropylene (PP), polyvinyl chloride (PVC), polystyrene (PS), polyamide (PA), polyethylene terephthalate (PET), polyester or the like can be used.

[0016] In order to improve the tightness of the corresponding layer material, if necessary, the layer can be provided with a coat of lacquer on one or both sides.

[0017] For the consumer to be able to exert pressure on the container for consuming the food, the container wall can be flexible. This also goes for the corresponding transparent or translucent, preferably liquid or fluid tight material.

[0018] In order to be able to connect the blank with itself for preparing the continuous container wall, the same can be rolled, for example, until lateral edges abut. Along this edge abutment, the blank is connected with itself. Additional connection means can also be employed, if necessary. Normally, this kind of connection is effected via heat and/or pressure.

[0019] It is also possible to not only form a connection along the corresponding edge abutment after the container has been rolled or folded, but to also form an overlap region of the blank by the edges assigned to one another, this overlap region extending in particular

in the longitudinal direction of the container and the blank being connected with itself in this overlap region.

[0020] If the transparent and fluid tight material extends to the upper end of the corresponding blank where the withdrawal opening of the finished container is formed, or if a container wall is completely made of this material, the opening edge of the withdrawal opening can be bendable or rollable without the corresponding material changing its properties. Thus, it is ensured that even the opening edge comprises the properties of the material, such as transparency, fluid tightness and dimensional stability.

[0021] As the corresponding material is dimensionally stable after it has been shaped, it is ensured that the opening edge maintains its corresponding shape even after having been bent or rolled round.

[0022] Furthermore, the shapability without the material changing its properties serves for avoiding, for example, a so-called crazing. It occurs, for example, in materials which are transparent in the beginning, which, however, comprise a normally linear whitening of the material otherwise remaining transparent after it has been shaped or folded. Such a crazing could otherwise also occur in areas of the wall where a consumer holds the container or exerts a corresponding pressure for taking out the food, which could result in buckling or folding lines. Even if such changes of the properties are partly acceptable, for example at the opening edge, they are particularly advantageously avoided.

[0023] In particular, if the complete container wall is formed from the material, the complete container is not only correspondingly transparent/translucent and liquid/fluid tight, but it is also dimensionally stable after having been shaped. This dimensional stability is, among others, important when the container is stored or transported between the place of manufacture and the

place of filling. Furthermore, the container remains open at least in the area of its withdrawal opening when it is filled due to a corresponding dimensional stability even without additional measures, so that the food can be easily filled in. The dimensional stability is also of assistance when the food is consumed, the container itself maintaining its shape even after the food has been taken out partially or completely. If the container is squeezed by exerting pressure for consuming the food, the dimensional stability is of assistance for the container to essentially take on its original shape after the pressing has stopped which results in the food being retracted back into the interior of the container.

[0024] The dimensional stability is also a property which is not to be changed, for example, for maintaining a sufficient stability as well as transparency and tightness also in the overlap region.

[0025] In order to be able to combine, if necessary, layers having different properties with respect to transparency and fluid tightness, the container wall can be formed from a corresponding two- or multilayer material, each of the layers being transparent. It should be noted here, that "transparency" can also mean only translucent and that fluid tightness can also mean only liquid tightness or gastightness and should be always understood in this respect.

[0026] An outer layer can be made in this connection from PP, oriented PP (coextruded or lacquered), PE, PET, PET (lacquered), PA, oriented PA (lacquered), or the like. For the inner layer, the following materials are possible: PP, PVC, PS, PA, PET, or the like.

[0027] With respect to the various layers, it is advantageous for these to be, for example, laminated. A large surface of such a laminate can be made of the corresponding layers and a blank can then be punched out of the laminate or prepared in another manner. The use

of such a laminate ensures the interconnection of the layers, at the same time maintaining the corresponding properties.

[0028] Another possibility of preparing and interconnecting the layers can be their coextrusion.

[0029] In order to be able to employ in a simple manner a corresponding blank for the container also for devices for the manufacture as well as for the filling hitherto employed for similar containers, the unshaped blank can be strictly two-dimensional. This makes it possible, on the one hand, to easily stack such a blank for the transport thereof and, on the other hand, to simply draw it into a corresponding device for folding or rolling the container from the blank.

[0030] In this connection, it is furthermore advantageous for at least the exterior sides of the blank comprising a certain roughness or basic friction which, for example, prevent a slipping of corresponding draw-in means relatively to the blank.

[0031] During the transport of the container both in an unfilled and an already filled state and the provision of the filled collapsible container or its use by a consumer, it is possible that the collapsible container comes into contact with spiky or sharp-edged objects. In this connection, it is an advantage for the corresponding material of the container wall to comprise a certain mechanical resistance towards such objects, preventing a damage which could have a negative influence on either the transparency or the fluid tightness of the material.

[0032] In order to avoid that during the manufacture of the container or its later handling in particular in the area of the wall a negative optical impression occurs, with a two- or multilayer construction of the material, the corresponding layers can be joined in a permanent perfect junction. Otherwise, a detachment of the layers in some places, could result in the impression

of a formation of bubbles or the like, which could, apart from the optical impression, possibly also have a negative influence on the transparency of the material.

[0033] Examples of such permanent perfect junctions are the above-described lamination or coextrusion.

[0034] Independently of the number of layers of the corresponding material, it is usually sufficient for one of the layers or the single layer used, in case of several layers in particular the central layer, to be an elastic one, which, however, can be permanently shaped and is a dimensionally stable layer after it has been shaped.

[0035] In order to achieve an optimum fluid tightness, it can prove to be an advantage if the tightness towards liquid and towards gas is achieved by separate layers. This can be achieved, for example, in that at least one inner layer is liquid tight and/or one of the further layers is gastight.

[0036] It is possible to combine the corresponding layers in the overlap region by additional connection means, such as an adhesive or the like. In a simplified embodiment, outer and/or inner layers can be formed as a connection layer at least in the overlap region.

[0037] With respect to the material of the layers, it should be noted that, for example, one of the layers can comprise a heat insulating function for cool or warm food and/or that it is also possible for all layers to be permeable to microwaves, for example, for heating food within the container.

[0038] Of course, there also is the possibility of achieving the fluid tightness towards liquids and gas by only a single layer.

[0039] In particular in the overlap region, but also in the region of the withdrawal opening and its opening edge as well as along all other edges of the blank, there sometimes occurs a problem in that these edges or free

ends of the corresponding material are not sufficiently sealed. Therefore, in particular liquid ingredients of the food or liquids located at the outside of the collapsible container, such as condensation water, can penetrate the material. Such a penetration normally changes the thickness of the corresponding material or at least of one layer of the material, such that bubbles can occur in the material and negatively influence the overall optical appearance. The penetration of such a liquid via the free ends or edges of the layers can also result in the container becoming altogether leaky or loosing some of its properties, such as the dimensional stability. Such a penetration in particular of liquid can furthermore result in a soaking of the surface of the collapsible container and a detachment of the material from the container. These disadvantages can be prevented by designing the edges of the layers to be fluid tight.

[0040] In order to give the container an optically more attractive design or for the representation of information, at least one of the layers can be provided with a print.

[0041] In both the processing of a corresponding blank for the manufacture of the container and the later filling or use of the container by the consumer, it is an advantage for the print to be resistant to rubbing. That means that the print can neither be rubbed off by direct contact nor by an action via one of the layers.

[0042] With a one-layer construction of the material of the container wall, the print is printed on one outer side of the container. This correspondingly goes for coextruded layers. With an otherwise multilayer construction, however, it is an advantage for the print to be provided on one inner side of the outer layer and/or one outer side of the central and/or one inner side of the central and/or one outer side of the inner layer. This makes it possible to combine several prints

which can differ in their graphical design or in their design in terms of colour.

[0043] For being able to provide sufficient heat in a simple manner for the connection of the blank with itself, at least one of the layers can be ultrasonic absorbent. The absorption of ultrasonics results in the heating of the corresponding layer which is at least strong enough for the layer to be sufficiently softened for forming an intimate and in particular fluid tight connection with a layer in edge or surface contact therewith after a corresponding cooling. This can naturally also be true for both layers in contact in the overlap region, in particular if these are made of the same material. However, in this connection it should be noted that the heating of the corresponding material by ultrasonics does not result in the transparency of the material to be negatively influenced after the connection and the cooling down.

[0044] If the layers are formed by a laminate it can be considered to be advantageous for the print to be printed before the layers are laminated. This on the one hand prevents it from being exposed to harmful influences directly at the exterior of the container and, on the other hand, there is no risk of harmful effects on the food.

[0045] In the layer construction of the material, it is also possible that one of the layers itself is a laminate.

[0046] There also is the possibility of only two or even more layers of the corresponding material being coextruded.

[0047] There are several possibilities of closing the container at its lower end.

[0048] In one embodiment, the closed end can be formed by connecting lower end sections of the wall. Thereby, essentially also the closed end is formed by the

container wall and its material and is transparent and in particular fluid tight.

[0049] In this case, preferably the lower end sections of the wall are pressed together before they are connected, so that the wall section can also be connected with itself by a corresponding thermal effect.

[0050] It is also possible to use a separate part for closing the container, so that for example the closed end comprises a bottom insert. This can be made of a separate blank.

[0051] Normally, the bottom insert does not have to be transparent. However, it is possible to prepare the bottom insert from the same material as the container wall and to also correspondingly employ heat and pressure for connecting the bottom insert and the container wall.

[0052] For closing the container in the region of the withdrawal opening, a lid can be tightly sealed in particular onto its opening edge.

[0053] The material used for the container wall and possibly also for the bottom insert is transparent, however, it can also be coloured. That means that the material is not clearly transparent, but red, yellow, green or the like, and that it is possibly rather of a coloured transparency.

[0054] In order to possibly avoid a negative influence of the food by the print, it can be printed onto one outer side of the container in case of a one-layer material. This can be analogously also done in case of a multiplayer, polyethylene-based material. Such a material is possibly also prepared by coextrusion. Naturally, there neither is any negative influence on the food by the material of the container or by a penetration or loss of fluid due to the container tightness.

[0055] In order to also prevent the container from being more easily damaged even in case it falls down in a

filled or unfilled condition, the material can be impact resistant and/or resistant to puncturing.

[0056] For the container, various cross-sectional shapes are possible which can also vary in the longitudinal direction of the container. This change does not only include dimensional changes of an otherwise identical cross-section, but also changes concerning other cross-sectional shapes. Examples of such cross-sectional shapes are circular, approximately polygonal, approximately quadrangular and in particular square, oval, bean-shaped or the like.

[0057] The print can be made in a usual manner by imprinting a corresponding means, such as colour or the like. There also is the possibility of preparing the print not only by printing such a colour, but also by impressing it into the corresponding layer or even by carving it or the like. The print can also have a three-dimensional effect or be a hologram or at least comprise the same, and the print can also have a glossy effect.

[0058] It is also possible that the print covers the complete container wall except for a control window and that the interior of the container can only be seen through this control window. In this connection, it is also possible for several of such control windows to be arranged in the longitudinal direction of the container and/or in the circumferential direction of the container. Thereby, various areas of the interior of the container can be seen.

[0059] For example depending on the colour of the print, there also is the possibility that the print itself becomes only visible after at least a part of the food has been taken out. This can, for example, be effected by the print having the same colour as the food filled in. In this case, it is also possible for certain parts of the print to be only visible after a sufficient amount of the food has been taken out and these parts

have been exposed and thus to result in a changing print. Such an appearing or changing print can, for example, serve for making possible certain raffles or the like, where one can identify whether one has possibly won anything only after a sufficient amount of the food has been taken out.

[0060] The opening edge can be rolled round, as already mentioned above. This rolling round can be a simple or multiple rolling round. With a bent opening edge, it is furthermore possible that the same is bent at an angle of 90° or more relative to the rest of the wall. Thereby, for example at an angle of 90°, the opening edge projects essentially radially to the outside from the withdrawal opening.

[0061] In order to be able to drink, for example, liquid food from the container at any location of the withdrawal opening, the opening edge advantageously extends along the complete periphery of the withdrawal opening. However, it is also possible for the opening edge to be only continuous partially and/or in places.

[0062] For the above described properties of the container and in particular of its material not to be provided, for example, only at room temperature, but also within a larger temperature range, it is to be considered to be favourable for the container and in particular its material to be stable at least in the temperature range of -50°C to +120°C, for example for the sterilizing device. This stability, for example, concerns the dimensional stability, transparency, fluid tightness and the like. In connection with the print, it should also be noted that there are also temperature sensitive prints which can also be used according to the invention. Such a print would, for example, change its colour and thus possibly also its information content at a predetermined temperature. A consumer can thus identify, for example,

whether a cooled food has a sufficiently low temperature or whether a heated food is warm enough.

[0063] In order to be able to store a plurality of containers in a simple manner and to take them out of the container stock, the container can be stackable and unstackable.

[0064] With respect to the dimensional stability of the container, it should also be noted that this can also be important in particular for the connection in the overlap region and the opening edge, for example to also continue the container shape in the overlap region, that means to impart the corresponding shape to a round or, for example, oval container even in the overlap region. Moreover, the dimensional stability is to prevent leakages from occurring in these regions.

[0065] With cooled or heated food, the corresponding temperature should be kept unchanged, if possible, at least over a certain period. For doing so, at least one of the layers can be formed as heat insulating layer. Such a heat insulating layer can, on the one hand, be heat insulating due to the specific material. On the other hand, there also is the possibility for the layer to contain a heat insulating material, such as air or the like, or for an air gap to be formed between two adjacent layers.

[0066] As already mentioned in the beginning, the invention also relates to a blank for the manufacture of a container described above, the blank serving at least for the manufacture of the container wall and possibly for the closed end and the opening edge.

BRIEF DESCRIPTION OF THE DRAWINGS

[0067] In the following, advantageous embodiments of the invention are illustrated more in detail with reference to the figures enclosed in the drawing.

[0068] In the drawings:

[0069] Figure 1 shows a side view of a first embodiment of a container according to the invention;

[0070] Figure 2 shows a section along line II-II of Figure 1;

[0071] Figure 3 shows a section along line III-III of Figure 1;

[0072] Figure 4 shows a side view of a second embodiment of a container according to the invention; and

[0073] Figure 5 shows a plan view of a blank for the manufacture of a container according to the invention in accordance with Figure 1.

DETAILED DESCRIPTION

[0074] Figure 1 shows a container 1 in a side view which has a cupulate design. Container 1 comprises a withdrawal opening 7 at its upper end in Figure 1 which is surrounded by a rolled opening edge 8, also see Figure 2.

[0075] A lid 21 is tightly attached to the opening edge 8. At least at one location, a lid handle 22 serving for drawing off the lid 21 from the opening edge 8 radially projects to the outside from the lid.

[0076] Food 2, which can be liquid, pasty, throwable or pourable, is filled in the interior of the container. The food 2 is filled in the container up to the filling level 23.

[0077] The container 1 comprises a container wall 6 which is formed by a blank according to Figure 5. The container wall 6 is made of a transparent and fluid tight material.

[0078] In the embodiment according to Figure 1, the container 1 comprises a bottom insert 25 at its end 9 opposite the withdrawal opening 7. The same is at least partially placed over or in the wall 6 from the outside and connected thereto in a fluid tight fashion.

[0079] The bottom insert 25 can be made of the same material as the container wall 6.

[0080] The container 1 comprises a print 15 in the region of the container wall 6. The corresponding printing can, in particular with a one-layer material for the container wall, be provided on an outer side 26 of the container 1 or on the outer side of the container wall 6. With a two- or multilayer construction, see in particular Figure 3, the print is printed onto an inner side 16 of an outer layer 3 and/or onto an outer side 17 of a central layer 4 and/or onto an inner side 18 of the central layer 4 and/or onto an outer side 19 of the inner layer 5.

[0081] Depending on the layer material used, the different arrangements of the print on one of the sides of one of the layers result in another optical appearance, prints also being combinable on different layers or sides of the layers, respectively, due to the transparency of the container wall 6. Such a combination can result in an optical effect, such as an apparent three-dimensionality of the print. Moreover, the combination of various prints makes possible colour combinations of varicoloured prints when a consumer looks at the combined print from the outside.

[0082] In Figure 2, a section along line II-II of Fig. 1 is represented. In this figure, one can see in particular how the container wall 6 is bent or rolled round to the outside at its upper end for forming the opening edge 8. The choice of the corresponding layer materials of the container wall results in the ductility when forming the opening edge as well as the dimensional stability after the shaping.

[0083] In Figure 3, a section along line III-III through the container wall 6 or the blank 10 in accordance with Figure 5 is shown. In the shown embodiment, the container wall is made of three material layers.

[0084] If only one material layer is used, the same can be, for example, made of polypropylene (PP), polyvinyl chloride (PVC), polystyrene (PS), polyamide (PA), polyethylene terephthalate (PET) or the like. Such a one-layer material is possibly provided with one or two coats of lacquer on its opposite sides for achieving a better seal with respect to fluids.

[0085] In case of two or more layers, see reference numerals 3, 4 and 5 in Figure 3, for example, the inner layer can be made of PP, PVC, PS, PA, PET, or the like, while the outer layer can be, for example, made of PP, oriented PP, polyethylene (PE), PET, PA, oriented PA, or the like. In particular, oriented PP, PET and OPA can be moreover lacquered. Moreover, it is possible for the oriented EP to be coextruded.

[0086] The different layers 3, 4 and 5 in accordance with Figure 3 can be joined as individual layers for forming the container wall 6. It is also possible for the layers to form a laminate, for at least one of the layers to be a laminate, or for the layers to be coextruded.

[0087] It has already been pointed out that in case of a one-layer material for the container wall 6, the corresponding print 15 is printed onto the outer side 26 of the container 1, while in a multilayer construction correspondingly inner and outer sides of the various layers each are used, without a print being applied to an outer side of the outer and an inner side of the inner layer.

[0088] In Figure 4, a second embodiment for a container 1 according to the invention is shown. In this container, and possibly also in the container 1 according to Figure 1, the container wall 6 is flexible, so that a pressure can be exerted on the container 1 from the outside in order to move the food 2 towards the withdrawal opening 8 for taking it out or consuming it.

If necessary, in particular in case of frozen products, such as ice-cream, in addition to the pressure, the heat of a consumer's hand is transmitted, such that a layer of liquefied food 2 is formed at least between the same and an inner side of the container wall 6. The above materials for the different layers 3, 4, 5 according to Figure 3 provide a flexibility of the container wall 6. At the same time, in particular by the use of PET (polyester), a layer material is used which stabilizes the corresponding shape of the container 1 according to Figure 1 or Figure 4. Such a layer material is flexible, but it is also relatively stiff.

[0089] The container 1 according to Figure 4 can comprise a handle 24 at its closed end 9 which is also formed by a blank 10 for the container wall 6.

[0090] For forming this handle 24, lower end sections 20 of the blank 10, see Figure 5, are pressed to one another after the blank has been rolled into the corresponding shape of the container, and by applying heat, they are intimately connected in a fluid tight manner. Even without the formation of such a handle, the closed end 9 can be formed by the connection of these lower end sections 20.

[0091] For simplification, in container 1 according to Figure 1, a corresponding print 15 according to Figure 1 is not shown.

[0092] In the blank 10 according to Figure 5, it has to be noted that the same comprises a surrounding edge 14. The same can be sealed for preventing a penetration of fluid. After the blank 10 has been rolled, the rolled condition can be fixed, for example, by arranging facing longitudinal edges 14 in abutting relationship and joining them directly or by means of an additional connection means. It is also possible for the edges 14 to overlap for forming an overlap region 12 essentially extending in the longitudinal direction 11 of the

container and for the blank to be attached to itself directly via a connection of the outer layer 3 and the inner layer 5. Additionally, an adhesive can be possibly arranged in the overlap region 12.

[0093] For forming the corresponding handle 24 according to Figure 4, the lower end sections 20 of the blank 10 can be pressed one to another and joined. This connection can be made simultaneously with the connection in the overlap region 12. An upper end section of the blank 10, designated by "8", serves as opening edge 8, after it has been bent or rolled to the outside, see Figures 1 and 2.

[0094] The represented embodiments according to Figures 1 and 4 are only exemplary and other container shapes are possible, such as containers with an inverted cone design compared to Figure 4, long stretched-out tubular containers, or the like. It is also possible for the corresponding transparent and fluid tight material for the container wall 6 only to be arranged at a circumferential section of the container wall in the longitudinal direction of the container 11, while the other sections of the container wall 6 are opaque. This corresponding transparent section can also be composed of several subsections spaced apart in the longitudinal direction 11 of the container, which are possibly out-of-line in the circumferential direction of the container 1. For a simplified manufacture of a corresponding container 1, it is, however, normally advantageous for the complete container wall 6 to be made of the corresponding transparent and fluid tight and possibly multilayer material. This in particular facilitates the arrangement of the print 15 in the interior of the material of the container wall 6.

[0095] In the following, the advantages according to the invention are again shortly summarized with respect to consumer-relevant and processing-relevant advantages.

[0096] One of the consumer-relevant advantages in accordance with the invention is that the corresponding container is characterized by some visual particularities. For example, the container can be prepared in various shapes, such as oval, circular, approximately square or even polygonal as well as bean-shaped and the like. Due to the transparency in particular in the visible spectral region, the contents of the container is moreover also visible without having to open it. Both the filling level and the condition of the food can be checked in a simple manner. The various possibilities of the printing result in further visual advantages. The print can also have such a design that there is a glossy effect which particularly emphasizes the print optically. Moreover, the print can have a three-dimensional effect. It is possible to provide the complete container with a print except for at least one window. The print can be formed by a hologram which offers further optical advantages. Moreover, the print can at least partially become visible only after the food has been taken out, which makes it possible, for example, to inform the consumer about a prize he won, or the like.

[0097] The consumer has a number of further functional advantages with the container according to the invention. One of these advantages is the tightness of the container with respect to gaseous and/or liquid fluids. The tightness relates to both a penetration and a leak of the corresponding fluid. One can also do without a corresponding fluid tightness, if the container is filled with an in particular dry food, of which the properties relevant for the consumption are not negatively influenced, for example, by an exchange of a gaseous fluid through the container wall. That means that this food is not attacked, for example, by oxygen, carbon dioxide or the like and that it is still suitable to be consumed without restrictions.

[0098] Further advantages of the container according to the invention are its flexibility due to which the corresponding food can be pressed out of the container. Simultaneously, the container is nevertheless resistant enough to external actions to be impact resistant and shock-proof. That means, if the container falls down, it is not damaged and even sharper objects cannot easily push through it.

[0099] At the same time, the container is elastic, so that it takes on its original shape even after having been pressed. The tightness of the container is furthermore advantageous as fluid can neither penetrate nor leak.

[00100] The resistance of the container also applies to the connection of the individual layers, so that even an only partial detachment of one layer is prevented. Altogether, the container is excellent for storing food, without the properties thereof being negatively influenced by external actions or by materials of the container with respect to the consumption of the food.

[00101] The dimensional stability of the container is selected such that it is flexible yet automatically takes on its original shape and also maintains its predetermined shape and its other properties in particular in the deformed areas of the container, such as the edge or conglutinated layers.

[00102] The print, too, is designed and arranged not to negatively influence the properties of the food or not to be removed from the container easily in any way by rubbing it off or the like. At the same time, the container is made of a material which offers a pleasant feeling to the hand even with cooled or heated food.

[00103] Apart from this plurality of consumer-relevant advantages, there is a similar number of processing-relevant advantages.

[00104] The ease of sealing the container according to the invention during its manufacture is an advantage which is in particular important for the conglutinated parts of the blank. However, the container is not only tight in these conglutinated areas, but also due to the materials of the container. Moreover, the container is appropriate for being printed or provided with a print in a simple manner, a number of possibilities for attaching the print onto one or more layers of the material being available.

[00105] Due to the even surface of the blank, the same can be easily processed and transported. In spite of the flexibility of the container material, it can be shaped and maintains its shape in the areas shaped as desired, such as for example in the edge region of the withdrawal opening. This dimensional stability furthermore comes in useful for the joint or conglutinated areas of the container, which also maintain their shape corresponding to the cross-section of the container. This results in a facilitation of the further processing or filling of the container, as the same always maintains its originally intended shape due to its dimensional stability and as, for example, an originally intended circular shape does not change into an oval or even flatter shape in the course of time.

[00106] This dimensional stability and a corresponding shaping of the container moreover result in a good stackability and unstackability which is also advantageous in terms of production and transport.

[00107] The tightness of the container is important for filling in the corresponding food as both during the filling and the later transport there is no risk of a penetration or leak of a corresponding fluid.

[00108] It is furthermore advantageous that the container is resistant both with respect to lower and higher temperatures with respect to its properties and

its shape. That means that, for example, a food can be filled in and subsequently cooled without the properties being changed, such as tightness, flexibility, dimensional stability, transparency, or the like. This is analogously true for elevated temperatures, which are, for example, advantageous for sterilizing the container. Moreover, correspondingly high temperatures can also occur if the container is used for consuming a heated food.

[00109] Finally, another processing-relevant advantage is that the container can be easily tightly closed by a lid which can be in particular placed upon the withdrawal opening and tightly connected with the corresponding opening edge.